AMENDMENTS TO THE CLAIMS

Listing of Claims

1. (currently amended). A method of simulating photoactive properties on a surface, comprising:

providing a surface;

depositing a photoactive coating comprising titania over at least a portion of the substrate to provide the photoactive surface; and

applying at least one peroxide-containing material over at least a portion of the surface.

2. (cancel)

3. (cancel)

4. (cancel)

5. (original) The method of claim 1, wherein the peroxide-containing material includes hydrogen peroxide.

6. (original) The method of claim 1, wherein the peroxide-containing material is an aqueous solution of hydrogen peroxide.

7. (original) The method of claim 6, wherein the aqueous solution comprises 1 wt.% to 30 wt.% hydrogen peroxide.

8. (original) The method of claim 3, wherein the photoactive coating has a thickness in the range of 10 Å to 5000 Å.

9. (original) The method of claim 1, including drying the substrate with the peroxide-containing material.

10. (currently amended) The method of claim 14, wherein the titania is at least partially crystalline.

11. (currently amended) The method of claim 14, wherein the applying step includes:

applying the peroxide-containing material to an applicator; and

wiping the applicator over the surface until a substantially uniform layer of the peroxide-containing material is on the surface.

12. (original) The method of claim 1, including applying an at least partly hydrolyzed polyalkoxysiloxane material over at least a portion of the surface.

13. (original) The method of claim 12, when the polyalkoxysiloxane material comprises at least one at least partly hydrolyzed material selected from

polymethoxysiloxane, polyethoxysiloxane, polypropoxysiloxane, polybutoxysiloxane, and mixtures thereof.

14. (original) The method of claim 12, including drying the polyalkoxysiloxane material for 3 minutes to 60 minutes.

15. (currently amended) A method of demonstrating hydrophilicity of a photoactive surface by exposing the surface to electromagnetic radiation having one or more wavelengths of visible light, comprising:

providing a substrate having a photoactive surface comprising titania; and

applying at least one peroxide-containing material over at least a portion of the surface.

16. (original) The method of claim 15, wherein the photoactive surface is a UV photoactive surface.

17. (original) The method of claim 15, including applying at least one at least partly hydrolyzed polyalkoxysiloxane material over at least a portion of the surface.

18. (original) The method of claim 17, including applying the polyalkoxysiloxane material to have a dry film thickness in the range of 1 nm to 5 nm.

19. (original) The method of claim 17, wherein the polyalkoxysiloxane material is an aqueous solution comprising less than or equal to 0.5 wt.% of at least partly hydrolyzed polyalkoxysiloxane.

20. (original) The method of claim 17, wherein the polyalkoxysiloxane material is an aqueous solution comprising about 0.1 wt.% to 0.2 wt.% at least partly hydrolyzed polyalkoxysiloxane.

21. (original) The method of claim 17, wherein the polyalkoxysiloxane material includes at least one at least partly hydrolyzed material selected from polymethoxysiloxane, polyethoxysiloxane, polypropoxysiloxane, polybutoxysiloxane, and mixtures thereof.

22. (original) The method of claim 17, wherein the peroxide material includes hydrogen peroxide.

23. (original) The method of claim 22, wherein the peroxide material is an aqueous solution comprising 1 wt.% to 30 wt.% hydrogen peroxide.

24. (original) The method of claim 15, wherein the photoactive surface comprises crystalline titania.

25. (original) A method of activating a photoactive coating using visible light, comprising:

providing a photoactive surface comprising titania; and

applying an aqueous solution comprising 1 wt.% to 30 wt.% hydrogen peroxide over the photoactive surface.

26. (original) A method of simulating photoactive hydrophilicity on a surface, comprising:

depositing a photoactive coating over at least a portion of the substrate to provide the photoactive surface; and

contacting the surface with an at least partly hydrolyzed polyalkoxysiloxane material.

27. (original) The method of claim 26, wherein the polyalkoxysiloxane material includes at least one at least partly hydrolyzed material selected from polymethoxysiloxane, polyethoxysiloxane, polypropoxysiloxane, polybutoxysiloxane, and mixtures thereof.

28. (withdrawn) A kit for demonstrating hydrophilicity of a surface, comprising:

a container comprising an aqueous peroxide material; and

at least one applicator.

29. (withdrawn) The kit of claim 28, including a substrate having a surface, with at least a portion of the surface having a photoactive material located thereon.

30. (withdrawn) The kit of claim 28, including a container comprising conditioned water.

31. (withdrawn) The kit of claim 28, including a container comprising a glass cleaning solution.

32. (withdrawn) The kit of claim 28, including at least one applicator.

33. (withdrawn) The kit of claim 28, including a container comprising an aqueous solution containing at least one at least partly hydrolyzed polyalkoxysiloxane material.

34. (withdrawn) The kit of claim 33, wherein the solution comprises from 0.1 wt.% to 5 wt.% of at least partly hydrolyzed polymethoxysiloxane.

35. (currently amended) An article, comprising:

a surface having a photoactive coating comprising titania; and

at least one peroxide-containing material deposited over the surface.

36. (cancel)

37. (currently amended) The article of claim 35~~36~~, wherein the photoactive material includes at least one at least partly hydrolyzed material selected from polymethoxysiloxane, polyethoxysiloxane, polypropoxysiloxane, polybutoxysiloxane, and mixtures thereof.

38. (original) The article of claim 35, further including at least one at least partly hydrolyzed polyalkoxysiloxane material deposited over the surface.

39. (original) The article of claim 38, wherein the polyalkoxysiloxane material includes at least one at least partly hydrolyzed material selected from polymethoxysiloxane, polyethoxysiloxane, polypropoxysiloxane, polybutoxysiloxane, and mixtures thereof.

40. (currently amended) The article of claim 35, wherein ~~the surface comprises titania and~~ the peroxide-containing material comprises hydrogen peroxide.